



**SOCIAL
EQUITY**



**ECONOMIC
DEVELOPMENT**



**HUMAN
HEALTH**



**CLIMATE
CHANGE**



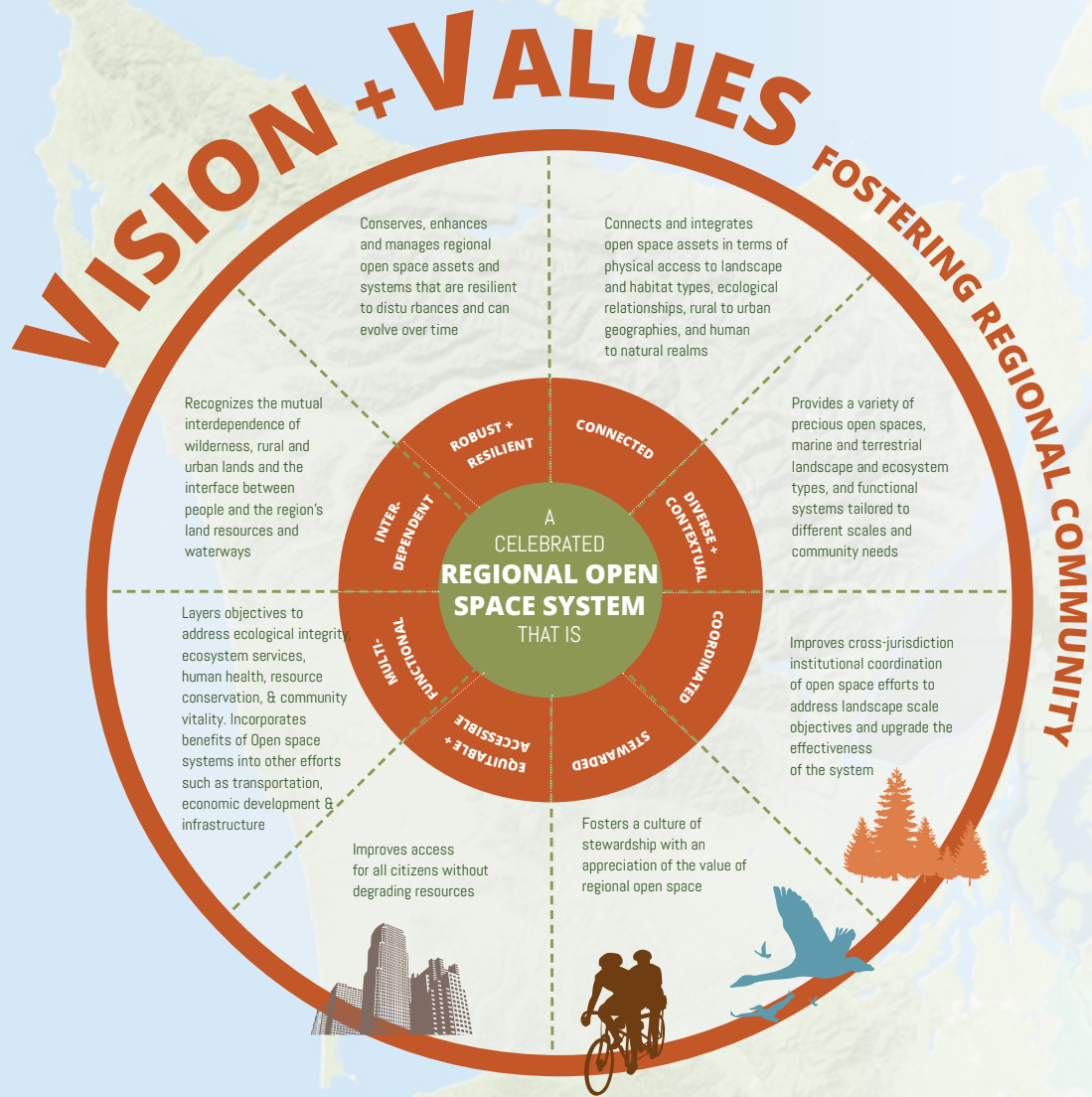
BIODIVERSITY

FIGURE 1: Addressing Regional Challenges through Open Space Analysis and Planning
Accelerated growth and development in the Puget Sound region has cumulated in an urgent need to address the critical regional challenges of biodiversity, human health, social equity, economic development, and climate change, possible through a robust green infrastructure system.



FIGURE 2: Regional Open Space Study Area

The Central Puget Sound region comprises eight major watersheds and four counties in the Greater Seattle Metropolitan Area, stretching from the mountain crests to the shorelines of Puget Sound – and is expected to support 5 million residents by 2040.



ECOSYSTEMS

An interconnected network of public and private lands that represents the full suite of natural ecosystems and habitats of a size and character that maintains and enhances biodiversity; provides the essential benefits of nature and ecosystem services; and sustains the crucial ecological processes, structures, and functions upon which healthy ecosystems depend.

RURAL + RESOURCE LANDS

A diverse and resilient landscape of rural and resource lands owned and operated by those that live in or are connected to the region. This landscape provides the food, resources, and ecosystem services we need; supports active resource-based economies; fosters rural communities; contributes to the identity and health of the region; and preserves our legacy for future generations.

COMMUNITY DEVELOPMENT

A complete, connected, diverse, financially viable, publicly embraced, and well managed open space system of appropriately scaled spaces that accommodates the needs of the environment and assures community health, personal well-being, and provides access for all members of the community regardless of their exact geographic location or income level.

RECREATION + TRAILS

A complete, context-sensitive, well-managed, and maintained system of land and water resources that promotes the full spectrum of human recreational activity, offering opportunities for all people, and contributing to the health and vitality of current and future generations. This system provides for the full continuum of communities urban to rural, alpine to marine, land and water.

FIGURE 3: Defining Vision and Values of the Central Puget Sound Regional Open Space Strategy (ROSS)

The ROSS initially convened over 100 stakeholders to lay the groundwork for a long-range strategy, defining a vision for a robust regional open space system that is “diverse, connected, coordinated, resilient, multifunctional, equitably accessible, interdependent, and stewarded.”

Iconic natural features and intimacy between natural and human settings establish the region's core identity and are important economic assets.

A full range of wilderness ecosystems, including prairies and forested lowlands, are essential for retaining the region's biodiversity.

Aquatic systems are essential for the region's ecological health which, in turn, is critical for the viability of human communities.

Walkable neighborhoods with parks and recreation opportunities are necessary for human health.

Parks, walkable streets, trees, green belts and other open space elements enhance the livability of urban communities, provide important green infrastructure functions, and encourage positive development.

For human and ecological health, aquatic systems requires continuity along the whole length and breadth of the watershed, including urban waterfronts.



Resource lands supply a wealth of ecosystem services such as flood reduction, air and water purification, carbon sequestration, and recreation in addition to providing food, wood products, and jobs.

Industrial estuaries provide substantial opportunities for ecological restoration along with more efficient shoreline use.

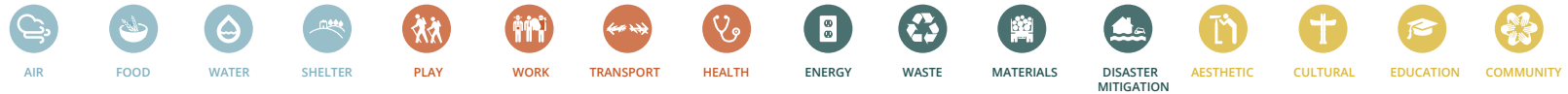
Regional trails, if connected to local neighborhoods and regional attractions, provide transportation, recreation, and human health functions as well as incentives for attracting new businesses.

FIGURE 4: ROSS Preliminary Comprehensive Strategy

The Preliminary Strategy called for an integrated spatial vision that measures and optimizes open space benefits, applying landscape ecology and ecosystem services concepts to guide decision-making and promote open space conservation values, from urban to rural to wild.

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OPEN SPACE SERVICES



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
UV Radiation Reduction	Crops	H2O Storage - AG	Lumber	Community Gardens	Timber	Fish - Creeks	Medicinal	Hydropower	--	Stone	Carbon Stock	View Point	Ornamental	Proximity to Nature	Governance
Noise Reduction	Seafood	H2O Storage - ID	Minerals	Trails	Agriculture	Fish - Lakes	Exercise	Biomass Fuel	--	Minerals	Sequestration	View Shed	Seafood	Intrinsic	Stewardship
Air Temperature (Urban Heating)	Meat/Game	Drinking Water	Habitat	Gaps in Access to Parks	Seafood	Fish - Rivers	--	Wood Fuel	--	Lumber	Flood Prevention	Meaning	Habitat	Stewardship	Social - Crime
Carbon Storage	Urban Gardens	H2O Reg - Timing	Reduced Risk - Heat	Regional Trail Gaps Analysis	Ecotourism	Fish - Sound	--	Minerals	--	Fibers	--	Attachment	Spices	--	Social - Safety
Air Purification	Spices	H2O Reg - Conveyance	Reduced Risk - Cold	Water-based Recreation	Nursery	Fish - Ocean	--	Wind Power	--	Herbs	--	Healing	Inspiration	--	Social Equity
Non-attainment Areas	Seed Dist.	Reduction of loss from Projected 2040 Inundation Areas	--	Wide open space Recreation	Real Estate	Transp - Boat	Pest Control	--	Decomposition	Natural Products	Landslide Prevention	Therapy	Worship Space	--	Place Meaning
--	Pollination	--	--	--	Gov't - Reg	Transp - Cargo	--	--	Detoxification	--	Soil Erosion	--	Historical Space	--	Attachment
--	Genetic Resources	--	--	--	--	Ppl - Trails	--	--	Filtration	--	--	--	Spiritual Space	--	Livable Cities
--	Genetic diversity	Water Quality	--	--	--	Ppl - Parkway	Therapeutic	--	Fertilizer	--	Soil Formation	--	Intrinsic	--	Local Economies
--	Soil Fertility	Reduction of loss from flooding	--	--	--	Ppl - Waterway	Mental Health	--	--	--	--	--	Future	--	Active Living
--	--	Moderate storm water runoff	--	--	--	Bird - Forest	Disease Control	--	--	--	--	--	Place Meaning	--	Safe Streets
--	--	--	--	--	--	Bird - Canopy	Genetic Resource	--	--	--	--	--	Attachment	--	--
--	--	--	--	--	--	Bird - Wetland	Wellness	--	--	--	--	--	Viewshed	--	--
--	--	--	--	--	--	Bird - Waterway	Healing/Therapy	--	--	--	--	--	--	--	--
--	--	--	--	--	--	Animal - Forest	Active Living	--	--	--	--	--	--	--	--
--	--	--	--	--	--	Animal - Park	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	Animal - Yards	--	--	--	--	--	--	--	--	--

FIGURE 5: Defining Open Space Services

We developed an “Open Space Services” framework – based upon “ecosystem services” but broadened to more responsively incorporate cultural and social equity benefits – to guide measurement of the values provided by farms, forests, urban parks and trails, and sustainable infrastructure.

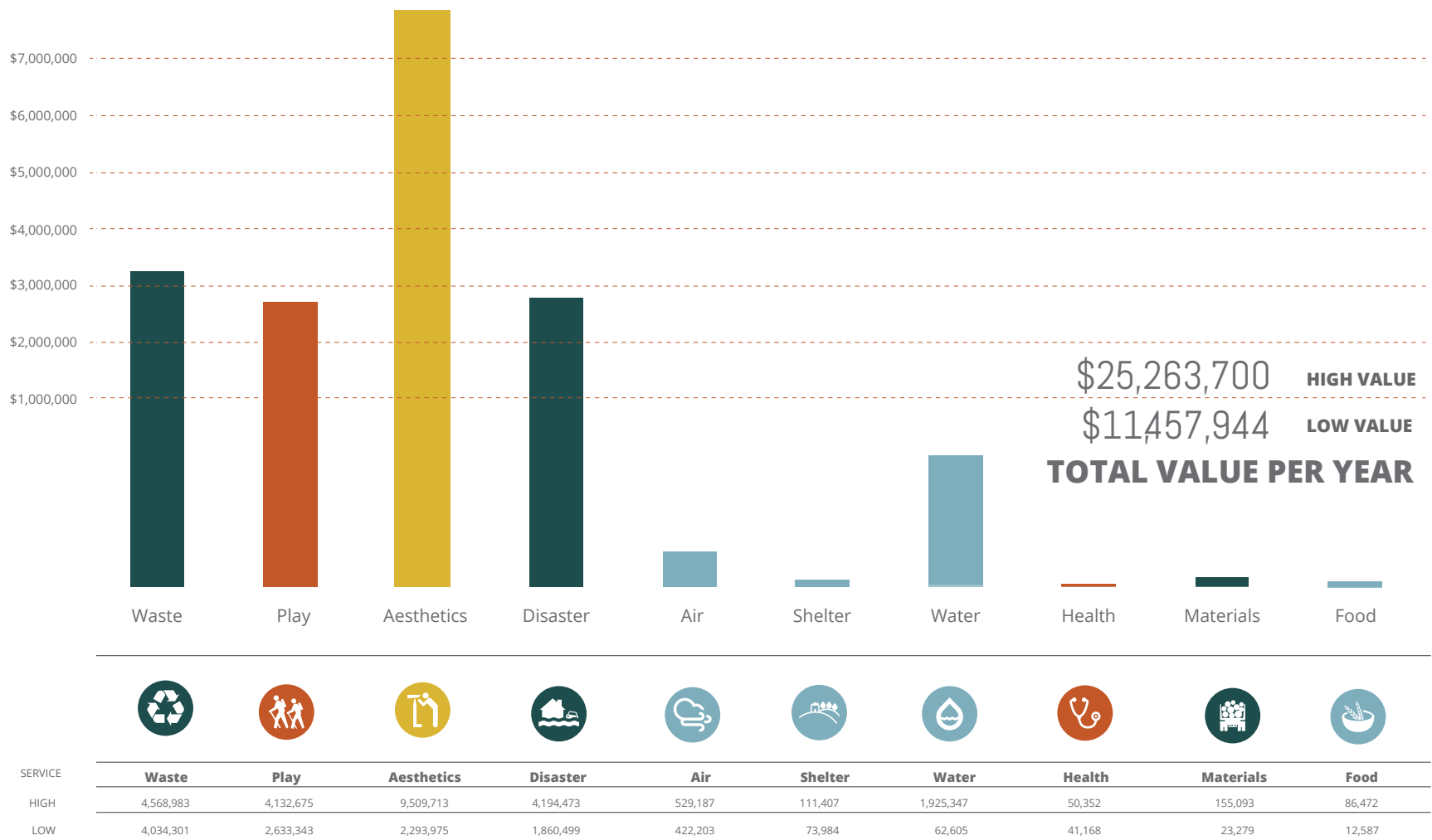


FIGURE 6: The Value of the Region's Open Spaces

The Planning Team modeled the current economic contribution of select Open Space Services, concluding that the 4-county region's open spaces contribute between \$11.4 and \$25.2 billion to the economy annually, and are valued at approximately \$825B.

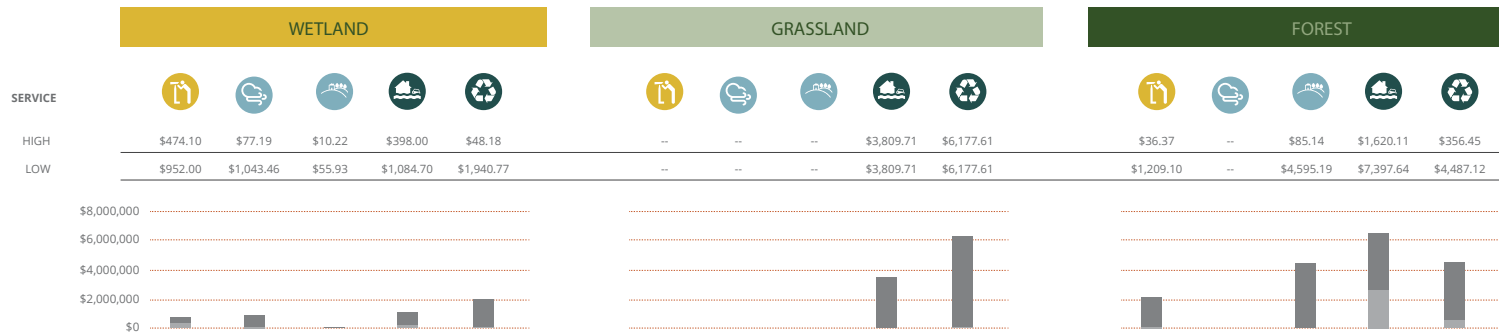
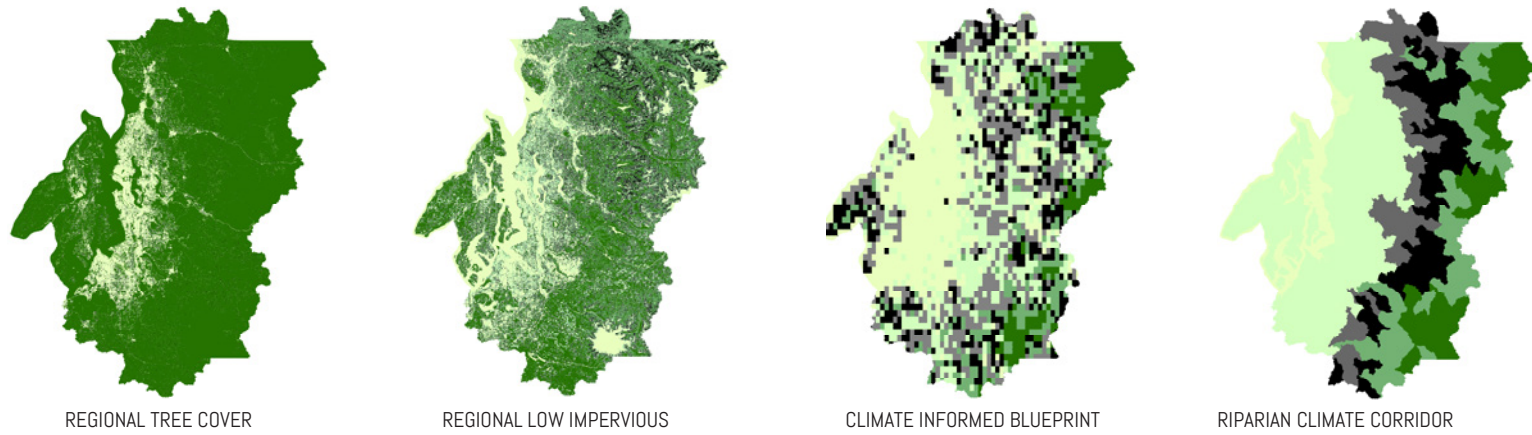


FIGURE 7: Open Space Services Analysis

Using the valuation, the ROSS team conducted economic analyses of open space services and return on investment of specific green infrastructure projects that were being considered for the “Green-Y” proposal, such as a levee setback for the Puyallup River.



PLAY

ENVIRONMENTAL IMPACT OF RECREATIONAL ACTIVITIES

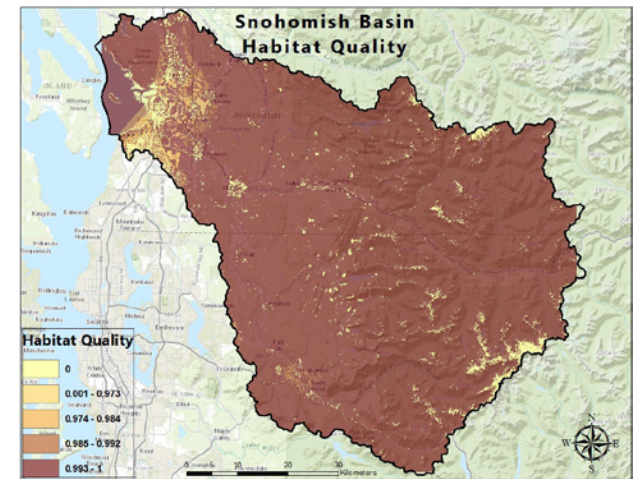
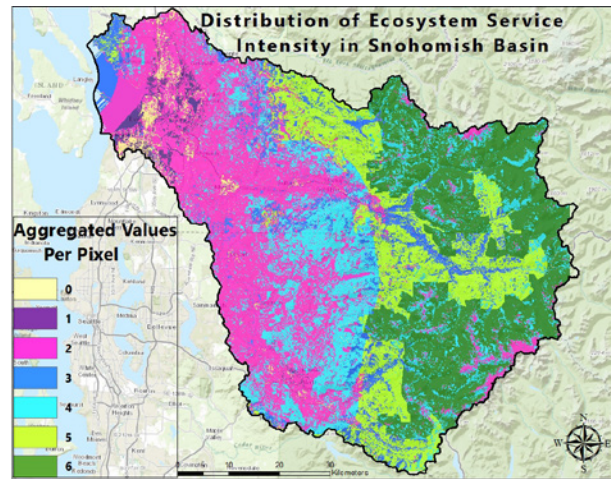
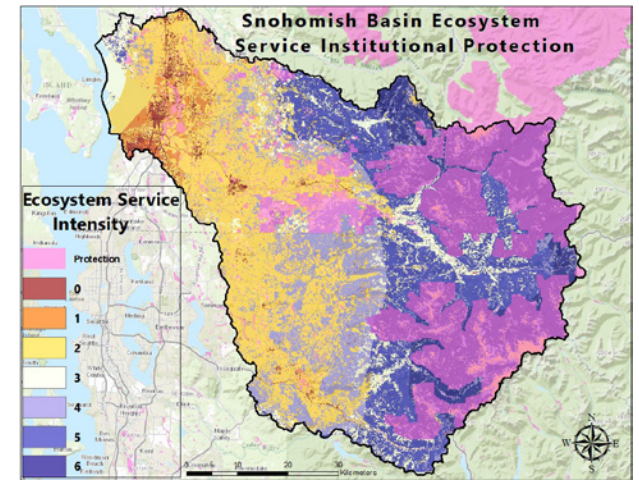
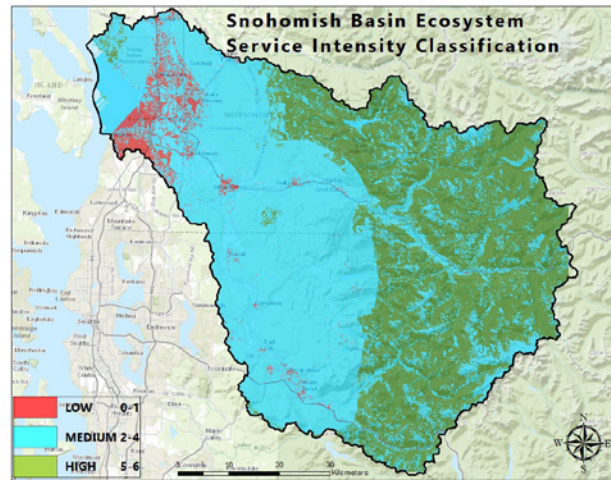
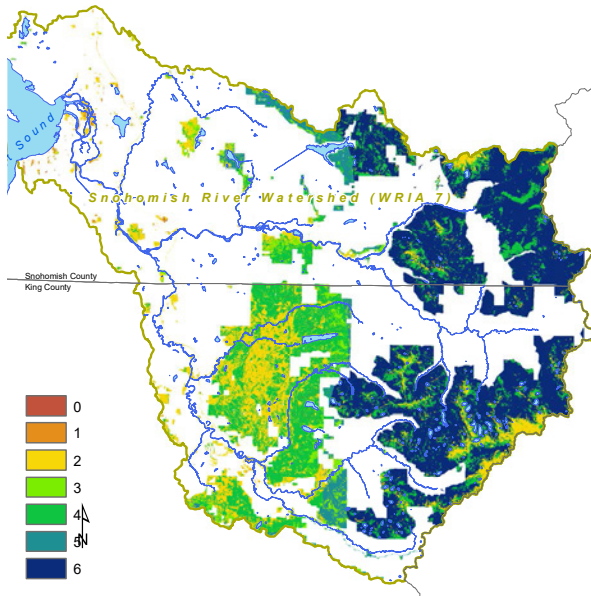


FIGURE 8: Ecosystem Services in the Snohomish Watershed

The Snohomish Basin has 60,000 acres of regionally significant forest land. Based on high interest from local stakeholders, we consolidated and evaluated coordinated recreation-based economic revitalization scenarios for open space benefits in the Snohomish watershed.

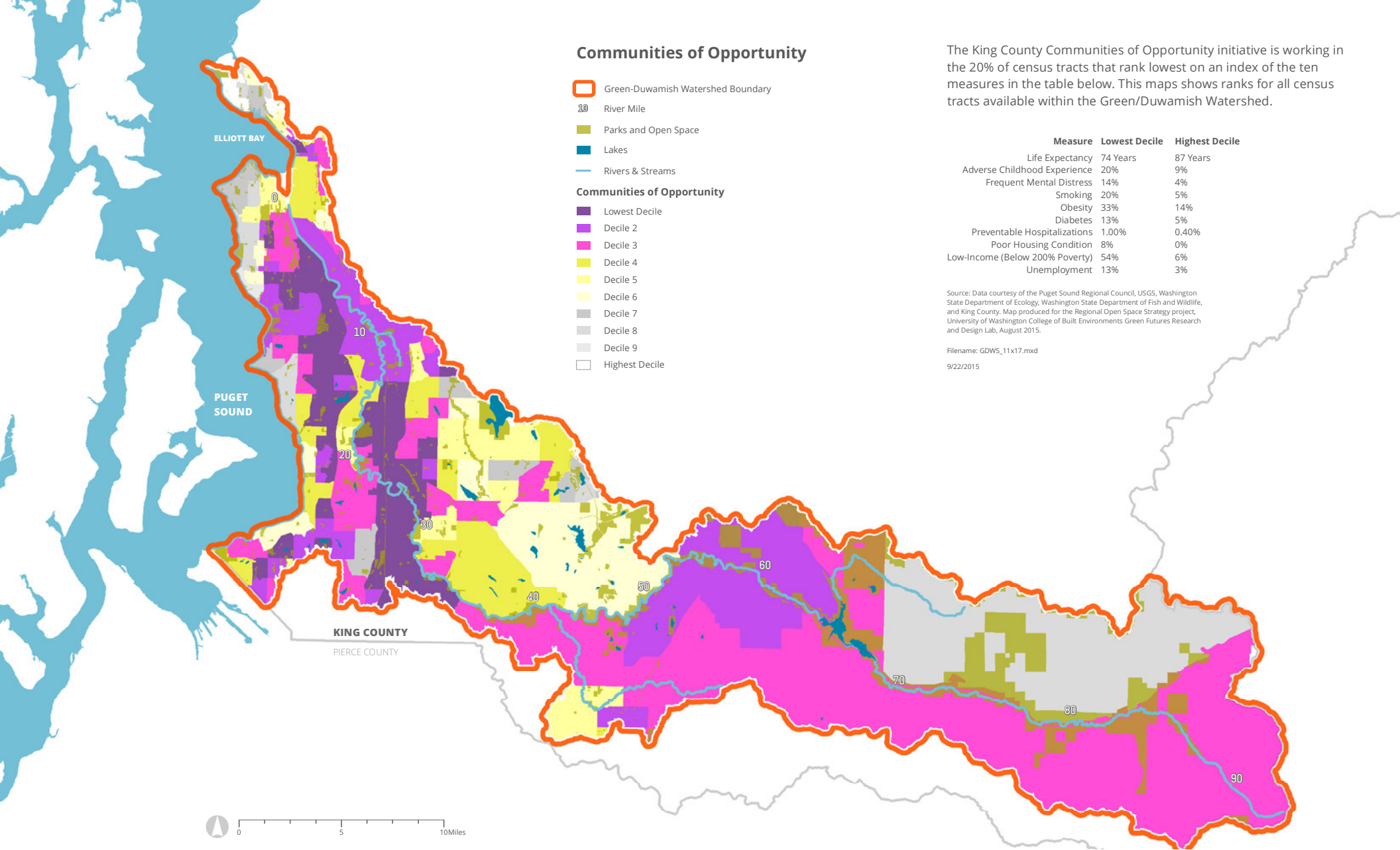


FIGURE 9: Equitable Access in the Green Duamish Watershed

In the Green-Duamish watershed, a more inclusive and equitable planning process emerged as the most important need. This watershed strategy process focuses on coordinating across dozens of jurisdictional plans for more equitable access to open space.

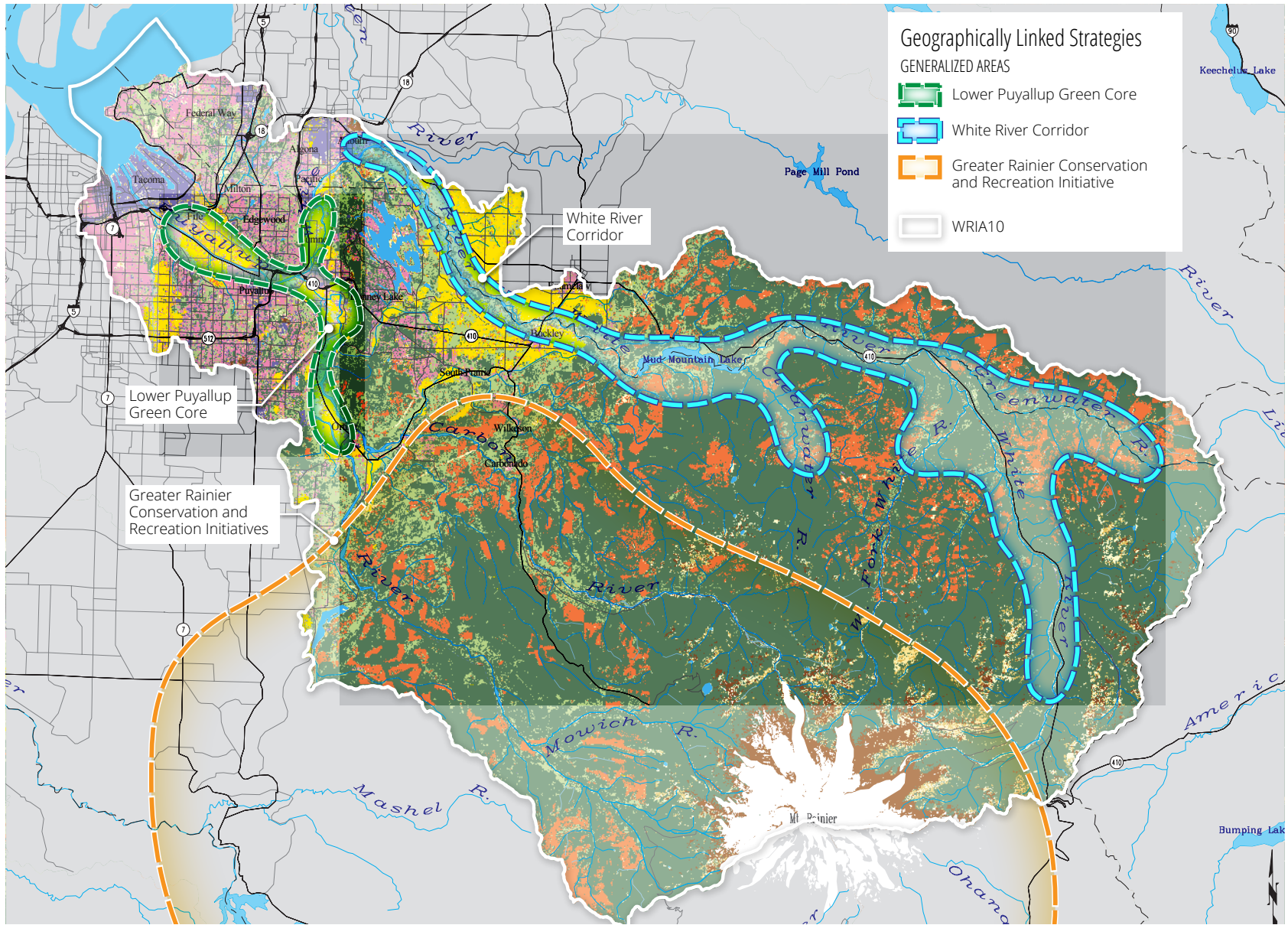


FIGURE 10: Puyallup-White Watershed Open Space Strategy: Synthesized Proposals

The “Green-Y” Core is one of the three integrative strategies from the Puyallup-White WOSS which combines proposals to retain remaining farmlands, improve the river’s ecological functions, connect regional multi-purpose trails and give equitable access to parks and open space.

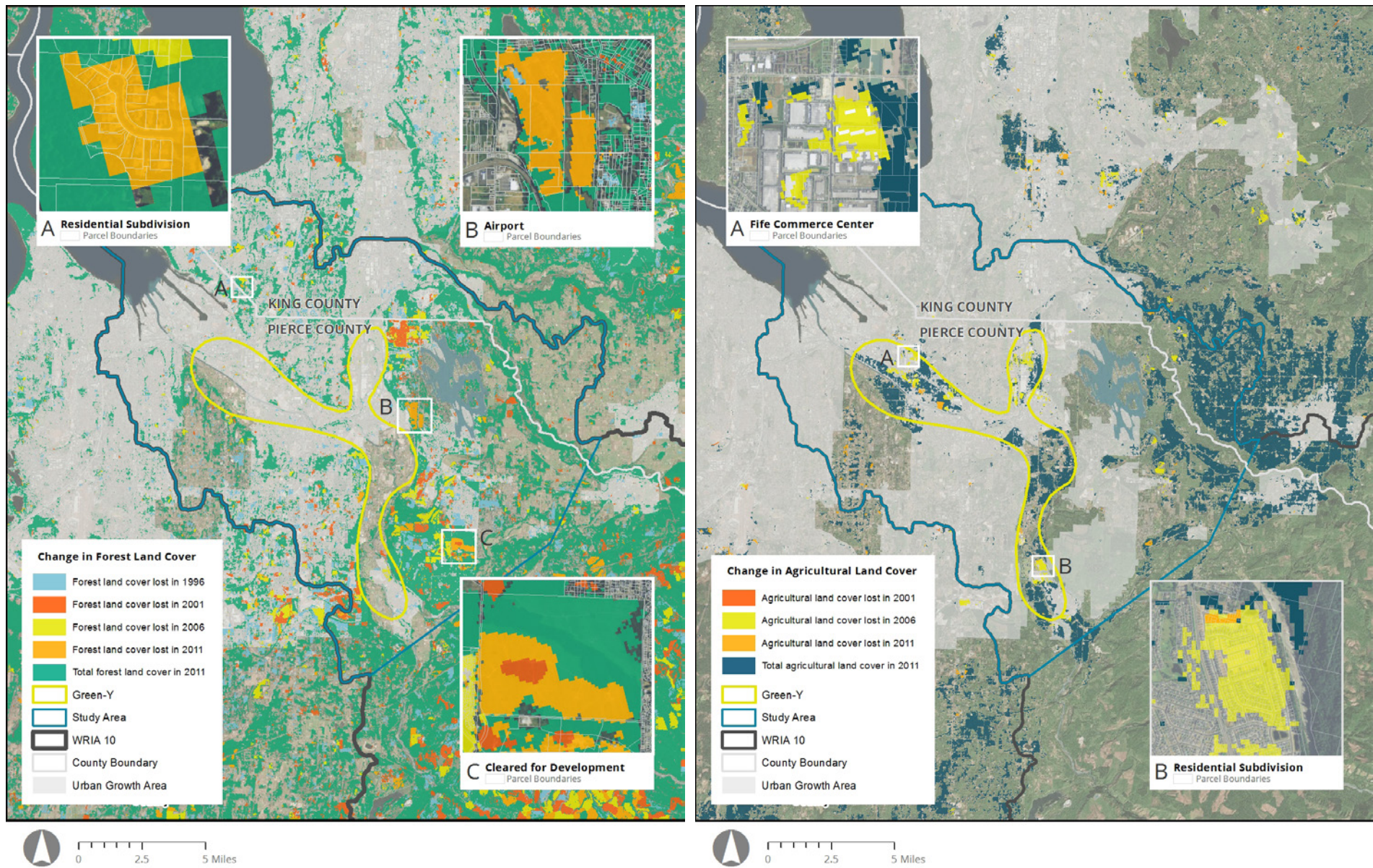


FIGURE 11: Regulatory Analyses

To advance implementation of proposed action items, further planning analysis focused on the regulatory challenges and opportunities associated with maintaining and enhancing forestry and agricultural resource lands in the fast-urbanizing “Green-Y” area of the Puyallup-White watershed.

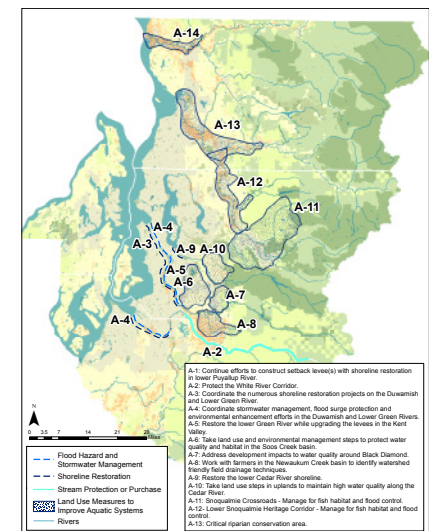
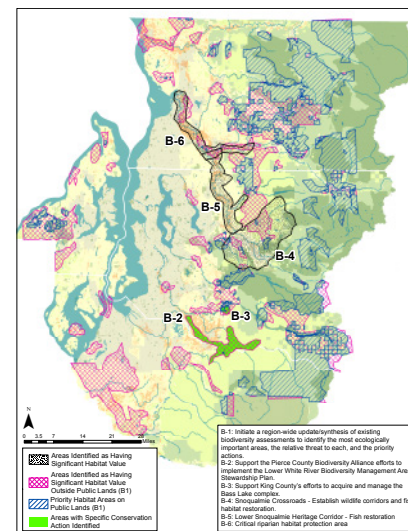
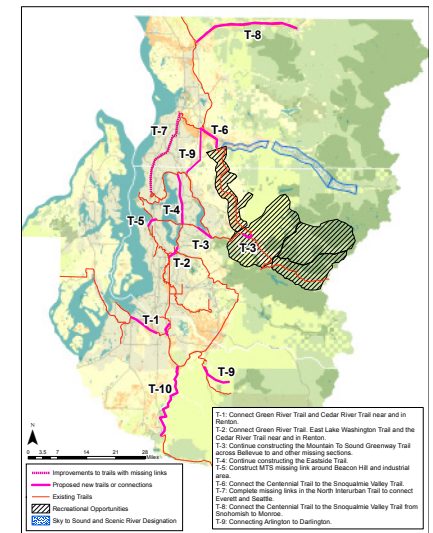
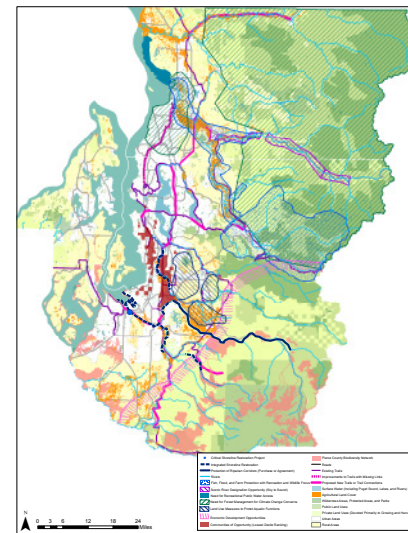
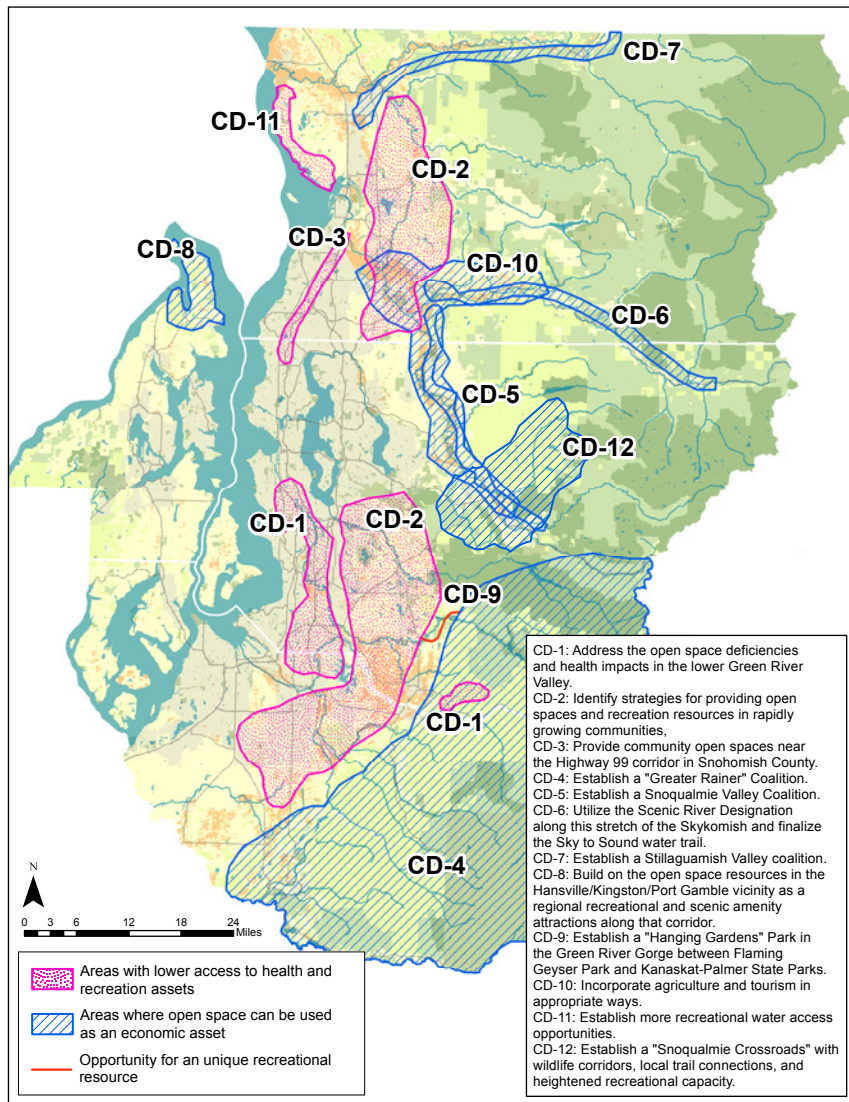


FIGURE 12: Regional Strategies and Priority Actions

Working between watershed and regional scales, the Team employed GIS data, planning documents, interviews and workshops with experts to identify the most important landscapes to conserve and enhance. Recommended actions address agriculture, forests, recreation, community, trails and habitat.



FIGURE 13: Communicating a Regional Vision

The ROSS team utilized video and 3-D modelling at the regional level to show how the green infrastructure system can address interconnected priorities. The narrative, rather than prescriptive, approach to a regional vision enabled collaboration between planning efforts.

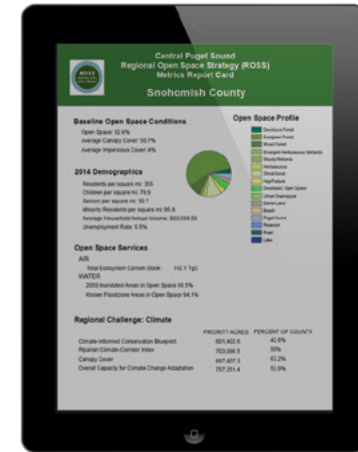
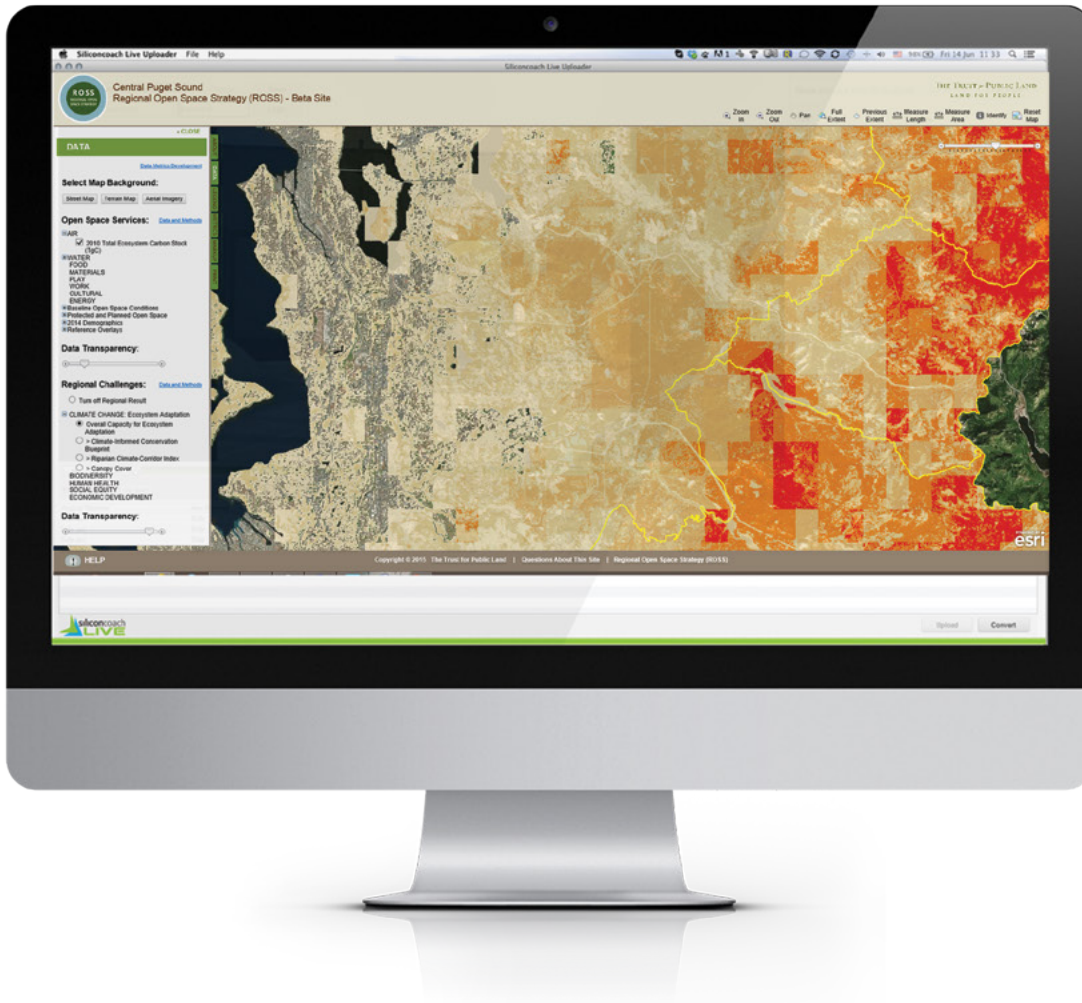


FIGURE 14: Ecosystem Service Planning Tool Development

The ROSS team and partners created a prototype online GIS tool to model the capacity of open space conservation and enhancement scenarios to confront identified regional challenges. The completed interactive tool will be available in the coming year.

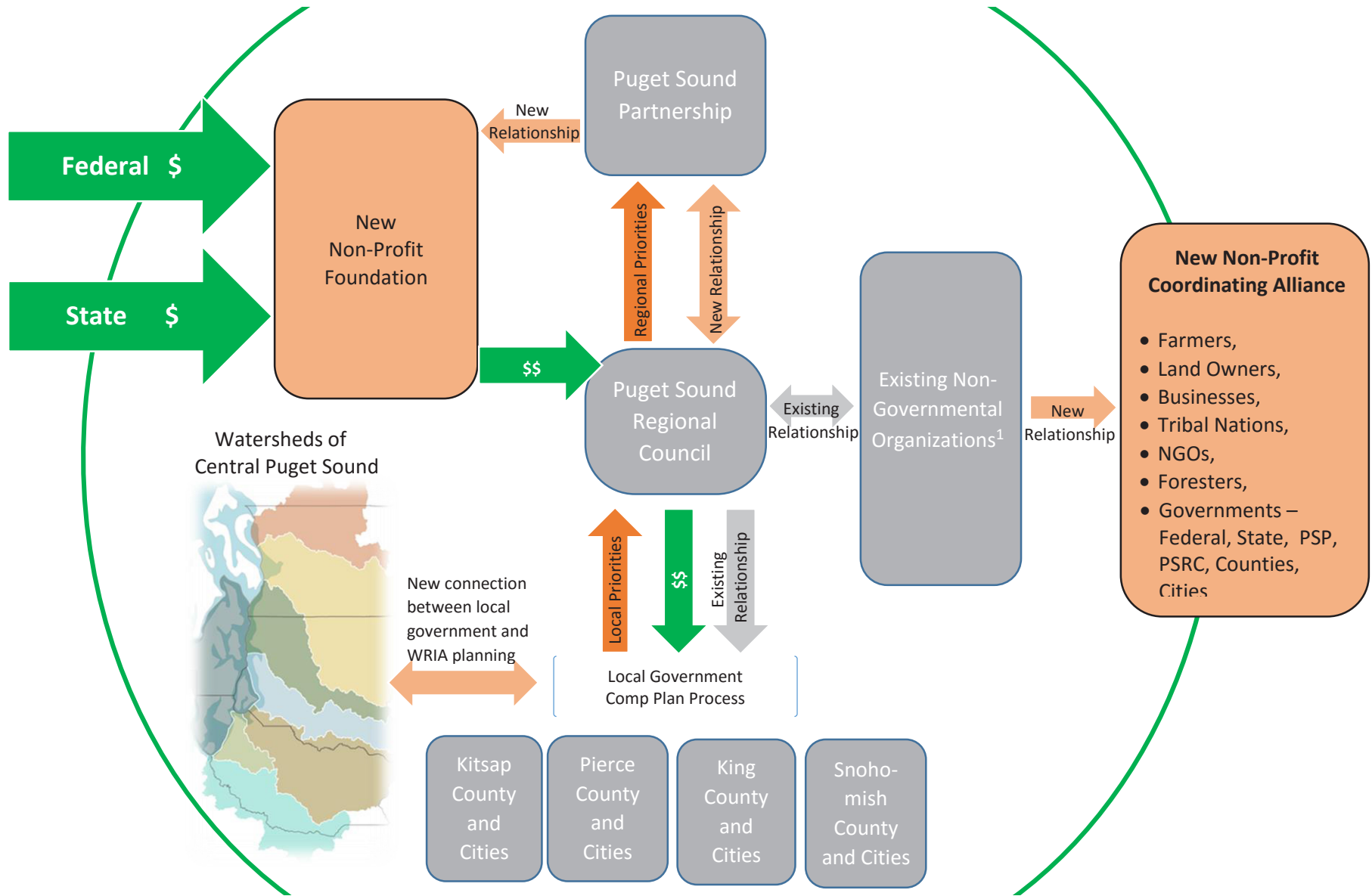


FIGURE 15: Regional Governance and Funding

The ROSS team worked with governmental and NGO leaders to craft an organizational strategy to expand, fund and implement the regional green infrastructure system, working in both sectors to coordinate open space and land use decisions across jurisdictional boundaries.